

Connectivity Africa (CA) External Review

Report to IDRC's Senior Management Committee (June 2007)

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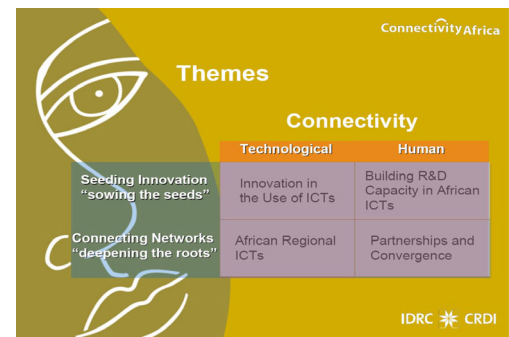
1. Program Aims

1.1 At the June 2002 G8 Summit in Kananaskis, Canada announced three initiatives as part of its response to the G8 Africa Action Plan and the recommendations of the Digital Opportunity Task Force. One of the three initiatives was Connectivity Africa (CA): a program to improve access to information and communication technologies (ICTs) in Africa.

The CA website describes the core program areas as themes and states:

1. **Innovation in the use of Information Communications Technologies** Helping Africans adapt new, low-cost ICTs that have particular relevance to African development.
2. **Partnerships and Convergence** Encouraging African institutions, communities, and individuals to increase their influence and impact by working together.
3. **Building Research and Development (R&D) Capacity in African ICTs** Helping Africans build the capacity to develop uniquely African ICT innovations tailored to local needs and preferences.
4. **African Regional Information Communications Technologies** Breaking down the technical barriers that prevent Africans from connecting easily to one another.

In order to understand the relationship between the themes, the IDRC CA Team Leader presented the following matrix to the advisory group. Acknowledging that Africa's digital divide is not just a question of technology but of human capacity as well, the matrix offers two columns – human and technological. For the rows the matrix takes the imagery of seeds. Africa needs “seeds”, i.e. new approaches, new adaptation of technologies, new capabilities in order to make the most from ICTs. Also the emerging plants need to deepen their roots and be strengthened; CA saw that this strengthening would come through networks – both technological infrastructure and people.



2. Review Methodology

2.1 This external review was conducted by Dr. Simon Batchelor with the assistance of Mr Moctar Sow. Dr Batchelor was team leader for the external review of Acacia in 2005, and there is considerable overlap of the stakeholders, partners and staff between Acacia and Connectivity Africa.

2.2 The evaluation team used a mix of primary and secondary data sources. The data collection methods included document review, individual and group interviews, observation, and field visits. Data collection began in January 2007, with most activities concentrated in the month of March

2007. Field visits included South Africa, Mozambique, Kenya, Uganda, Ethiopia, Senegal and Burkina Faso and London.

2.3 Connectivity Africa has often funded multiple projects that work together for a common theme. The field visits resulted in interviewing stakeholders involved in over 30 funded projects, although these projects can be conceptualised as 13 clusters or suites of projects. The case studies represent 52% of all disbursed project funding. The geographical coverage reflected and was representative of the whole program. The sample was able to give insight to projects with small funding such as FRAO Senegal and Harambee, and large multi year funded programs of work such as the UHIN/MHIN cluster. The sample also covers a mix of programs that were single country focused and regional activities. In addition, key informant interviews were conducted with donors and international agencies. Those approached included DFID, Industry Canada, UNECA, CIDA, SIDA and IDRC.

3. Review Findings

3.1 From the case studies, which are in themselves a good representation of the program as a whole, it is clear that CA has addressed the themes. Connectivity Africa has not been a technology oriented program. It has been a balanced mix of technical and social innovation and network building. It has built the capacity of people at various levels – at university level among the IT literate, at national level among policy makers, and at district level among field workers and teachers. This balance of emphasis on technology and people is a considerable strength of the program.

3.2 Each of the projects has made significant progress towards their individual project objectives and since they were chosen against criteria representing the whole program, they contribute to the program objectives. The overall program has seen movement towards the objectives. The emphasis of the objectives is on African capacity. There are clear examples of how capacity has been built, and there are strong networks that should take the capacity into the future.

3.3 As a systematic theme identifiable throughout CA programming, a focus on encouraging a change in gender roles has not been particularly evident. This statement needs to be held in context – CA and Acacia PI are both implemented by the same team. As such, there has been a tendency to treat it as one program. Acacia has undertaken significant applied research regarding the participation of African women in the information society e.g., Grace.net and Régentic. While these projects do suggest that the program team are gender aware, nevertheless there does seem to be a lacking of gender awareness as a cross cutting theme in all the projects.

The results of Connectivity Africa can be broken down into broad headlines by theme.

3.4 **Innovation in the Use of ICTs** Low cost alternatives have been demonstrated. In particular:

- the use of wireless technologies over distance in order to share bandwidth across local institutions (Schools, Government Centres, Telecentres and Medical facilities). There is a danger that the technical output of such experiments will be overtaken by new technologies (eg WiMax), however, the people networks and capacity built are valuable in the longer term.

- refurbished computers have been shown to be a viable mainstream low cost technology for schools
- the use of PDAs have been demonstrated as a viable means of collecting field data, and for a two way flow of information including personal professional development

3.4.1 A cadre of Africans have explored and learnt about wireless technologies. Their capacities have increased, and whichever direction the technology goes, their confidence to innovate has been increased. This confidence to explore is a valuable commodity in ICTs. ICTs is an ever changing sector, and new opportunities and possibilities are constantly arising. If people have gained a confidence that just says, “I could try and see if it works”, then that alone is of incredible value.

3.4.2 Demonstrating the innovative use of ICTs has influenced policy makers. For instance, MRC in South Africa has been able to gain a view on information management within the South African health system which has changed from disease orientation to a patient focus. It is clear that CfSK and UHIN have influenced policy makers in Uganda, Kenya, Mozambique. In addition to this the projects, and hence the program, may have influenced policy makers beyond their immediate stakeholders. These innovations are exploring the windows of opportunities opened by technical changes, and as such are influencing research and policy.

3.5 **African Regional ICTs** The cadre of researchers have explored the regional connectivity, and found a voice to argue their case for better connectivity. In particular:-

- Academia has been developing plans that will enhance regional connectivity
- Activities on the GSM network have facilitated peering of GSM networks
- Wireless capacity building workshops brought together players from different countries that will work together towards regional actions as and when appropriate.

3.5.1. The higher educational institutes of a number of countries have addressed their connectivity issues. This has not only enhanced their own understanding of connectivity and its place in research and education, but they have been able to get involved with and take advantage of a significant policy “window of opportunity”. Policy has been affected within universities, within national educational policy and within regional ICT infrastructure. For example, the involvement of UbuntuNet Alliance was key in the fibre optic discussions and whether bandwidth should be based on the Open Access principles.

3.6 **Research and Development (R&D) in African ICTs** Connectivity Africa has been able to involve research institutions in a number of key activities that could have longer term impact, while at the same time building research capabilities. For instance,

- MICTI has contributed to Government plans for ICT business
- AVOIR has led to a growth in software development in universities
- AVOIR has contributed to e-learning within academia
- ART has demonstrated efficiencies that could be applied throughout the continent.

3.6.1 Universities have explored working with the private sector, in the context of the development of the country. This theme of R&D in African ICTs has also contributed to policy development. For instance, MRC is discussing with Provincial Health authorities about the handling of management information systems, and is moving towards a harmonisation across South Africa. MICTI has been able to broaden the horizon of the Ministry of Science and Technology regarding its Science Park development and longer term plans for strengthening the Mozambique economy. These actions found a window of opportunity i.e. the government considering Science Park models, and was able to bring together a community of change i.e. former Board members of the MICTI incubator development who were able to influence the government.

3.7 **Partnerships and networks** This theme focused on the need for partnerships and networks. In terms of policy influence it was looking for communities of change, and has succeeded. In particular:-

- Academic alliances have demonstrated the value of collective bargaining
- Partnerships have shown how Open Source software can be developed into viable packages (e.g., OpenMRS and EKewl)
- Judicial openness demonstrates the role of technology in creating a partnership base for a mainstream sector in a country and in a region.
- Donor co-operation has led to synergies and gains (eg Catia, CA and UNECA)

3.7.1. The community of change created by the alliance of Catia, CA and Acacia stakeholders should not be underestimated. While Catia was focused more on planned policy influence, it often drew on the same people as CA (people who had had their capacities enhanced by CA projects) and on the results of the CA program,

3.8 When we consider the case studies, it is clear that research has been a strong thread running through all projects. Innovation has been carried out in the context of study. FMFI which initially seemed to be a technical innovation project used outcome mapping to get engineers to consider the social impact of their work. Social analysis became a part of the project, and led to a more holistic analysis. It considered the potential replicability and scalability of the innovations.

3.9 Many of the supporting activities for the cases have been in the realm of monitoring or evaluation, or applied research. The research methodologies of Acacia have been used within CA i.e. the value of action research, networks and the approach to network meetings, activities for action implementation and research, and then networking again to share and diffuse the outcomes. This is the use of a research methodology not just to analyse but to enhance the proposition. The result is that there has been valuable lesson learning and a synergy between Acacia (which is clearly a social applied research PI), and consequently CA has been enhanced.

3.10 The Acacia review recommended a review of the web strategy, and a mirroring of research results on the IDRC site. While reviews have been conducted and some action taken, the experience of Connectivity Africa suggests that further intentional dissemination of research outputs on the web would be worthwhile. We acknowledge that policy makers in Africa are not yet in the habit of using the web to find new ideas and materials, and that there is still a strong role for paper. The review notes that there are publications in the pipeline and would encourage the team to “follow through” with a wide range of outputs that can address different stakeholder

groupings. Policy makers are not a homogeneous group, and different products are required to enhance different approaches.

3.11 Risk management was appropriate. At the start of Connectivity Africa, there was discussion regarding setting up an African “Institute”. This concept was challenged as potentially leading to an institution that would require basic funding after the program end, and would struggle to reach sustainability as donors tend to resist funding basic institutional costs. The direction the program took, which was to incorporate the management of the program into the Acacia team, was very appropriate. It led to a cost effective approach to managing the program and sustainability has been enshrined in the networks of African researchers and in building capacity of existing institutions, thus avoiding the risk of creating a new institute with all the challenges associated with such an action.

3.12 The risks of sustainability have also been mitigated by the integration with Acacia. By being part of a longer term research program, apparent one off projects have been able to be drawn into longer term program, for instance the JuriBurkina program has now been integrated into the RIJA program (funded by Acacia).

3.13 The program as a whole has evolved over the period of implementation. Partners were assessed and risk mitigated through the normal approval procedures. The flexibility of the program and its call to innovation did invite it into a risky space. Technological innovation can often fall down through institutional and contextual capacities, and that has been true for some of the projects. With hindsight a wider assessment of social economic context might have increased the mitigation of some of the risk. Nevertheless the professionalism of the program staff and their team approach and use of procedures was more than appropriate, and weaknesses have been used as opportunities for lesson learning.

3.14 So were the themes appropriate, did they lead to program influence, and do the headlines of outcomes given above add up to overall program value? Our judgement is that it does add up to value. In any innovative venture, there is relatively high risk. The market may not be developed, the concepts or ideas may seem “far fetched” to the status quo, the technology may stumble or by their very nature, pioneering personalities may be difficult to work with and may not stick around to see an idea through. Since Connectivity Africa was commissioned to be innovative, in terms of process it potentially faced some or all of the above. Its navigation through this difficult space without landing on the rocks is a credit to the team.

3.15 Overall the program presents good value for money. In comparison with similar programs such as Catia and Acacia, the program stands with an equivalent value.

4. Issues for consideration

4.1 If a Connectivity Africa II is envisaged it should retain its emphasis on building capacity, retain the strategy of networks and partnership and continue to push for regional connectivity. While it should keep a view on innovative technology, it should widen the view to include convergence with traditional media, applications and the role of ICTs in efficient and effective delivery of development interventions.

4.2 The link between Acacia and CA, managed by the same team, has added value, and is to be recommended should a future CA program be funded. It would be good to continue close co-operation with other donors as and when appropriate and an annual shared workshop with other donors would be appropriate. An advisory group meeting on a 6 monthly basis would not be advised. Close cooperation with UNECA needs to be focused around specific activities which UNECA can take the lead on.

4.3 Many of the innovative technologies are only just reaching a point where lesson learning can be consolidated and replicated, and even scaled. The CA program was a short time span for such innovation to be tried, tested, freed from technical bugs, and disseminated. If Acacia picks up elements of the CA program then dissemination will occur, but it would be beneficial to have funding for the next few years to take the lesson learning forward.

Acronyms

ART	Anti-Retroviral Treatment
CA	Connectivity Africa
Catia	Catalysing Access to ICTs in Africa
CfSK	Computers for Schools Kenya
DFID	UK Department for International Development
FMFI	First Mile, First Inch
FRAO	Fondation Rurale pour l'Afrique de l'Ouest
GSM	Global System for Mobile Communications
ICTs	Information and Communication Technologies
MHIN	Mozambique Health Information Network
MRC	South African Medical Research Council
MICTI	Mozambique ICT Institute
PICTA	Partnership for ICTs in Africa
PDAs	Personal Digital Assistants
RIJA	African Legal Information Network
UHIN	Uganda Health Information Network
UNECA	United Nations Economic Commission for Africa
WiMax	Worldwide Interoperability for Microwave Access

This is an executive summary of the report, "Connectivity Africa External Review Report" by Simon Batchelor and Moctar Sow, May 12, 2007. The full report is available from IDRC's Evaluation Unit.